

**DETAILED ACTION**

***Information Disclosure Statement***

1. Receipt is acknowledged of information disclosure statement (IDS) submitted on 04/04/2006 and 03/14/2006. The submission is in compliance with the provisions of 37 CFR 1.97.

Signed copies of the information disclosure statements are here enclosed.

***Examiner-Initiated Interview***

2. An examiner-initiated telephone interview with Applicant's Attorney, Mr. Kenneth L. Mitchell, Reg. No. 36,873, has been conducted on April 14, 2008. The examiner asked for clarification of prior art technologies underlying the invention. After consulting with the Applicant, the Attorney replied that all underlying technologies are adequately described in the 23 references submitted along with the application. It turned out, the Applicant is primarily relying on three patent application publications, i.e., DE 44 35 043 A1, DE 44 16 597 A1 and DE 196 09 234 A1, all issued to Applicant and clearly recited in the disclosure on page 2. In other words, Applicant is trying to use the three cited references as incorporation by reference.

3. Upon evaluating the cited references the examiner made the following decisions:
  - (a) Although the content of the cited three references (in German) are found adequate as guidance for a prospective user to make and/or use Applicant's invention, they are

improperly incorporated by reference. In order to properly incorporate the three reference into Applicant's disclosure, it is necessary to clearly recite the wording "**incorporated by reference**" in the specification, instead of as casual narratives among the text, as presently done by Applicant. See 37 CFR 1.57 (b), (c) and (d).

(b) Since the cited references are "*Essential Material*" according to 37 CFR 1.57 (c), they have to be provided in the English language. Applicant is required to replace the German document with their equivalent US patent (application) documents, or other NPL documents written in the English language.

(c) The claims having been amended (per Preliminary Amendment dated 03/14/2006), the disclosure should no longer recite any reference to a cancelled claim. An example can here be found on page 3, which still recites a reference to (cancelled) claim 20. While this is only an example, Applicant is required to clean the entire disclosure, including the abstract and the claims, with regard to similar references.

#### ***Preliminary Amendment***

4. The Preliminary Amendment filed 03/14/2006 has been entered. The present Office Action is made with all the arguments being fully considered.

Claims 5-38 have been cancelled.

New claims 39-54 have been added.

Claims 1-4 and 39-54 are pending in this office action.

***Objections to the Specification***

5. The disclosure is objected to because of the following informalities:

On page 3, line 12 from bottom, it recites Claim 20. However, claim 20 has been cancelled per Preliminary Amendment dated 03/14/2006.

Appropriate correction is required.

***Improper Incorporation by Reference***

6. The incorporation of essential material in the specification by reference to an unpublished U.S. application, foreign application or patent, or to a publication is improper. Applicant is required to amend the disclosure to include the material incorporated by reference, if the material is relied upon to overcome any objection, rejection, or other requirement imposed by the Office. The amendment must be accompanied by a statement executed by the applicant, or a practitioner representing the applicant, stating that the material being inserted is the material previously incorporated by reference and that the amendment contains no new matter. 37 CFR 1.57(f).

7. The attempt to incorporate subject matter into this application by reference DE 44 35 043 A1, DE 44 16 597 A1 and DE 196 09 234 A1, is ineffective because the references, which constitute "*Essential Material*" according to 37 CFR 1.57 (c), are not provided in the English language.

8. The incorporation by reference will not be effective until correction is made to comply with 37 CFR 1.57(b), (c), or (d). If the incorporated material is relied upon to meet any outstanding objection, rejection, or other requirement imposed by the Office, the correction must be made within any time period set by the Office for responding to the objection, rejection, or other requirement for the incorporation to be effective.

Compliance will not be held in abeyance with respect to responding to the objection, rejection, or other requirement for the incorporation to be effective. In no case may the correction be made later than the close of prosecution as defined in 37 CFR 1.114(b), or abandonment of the application, whichever occurs earlier.

Any correction inserting material by amendment that was previously incorporated by reference must be accompanied by a statement that the material being inserted is the material incorporated by reference and the amendment contains no new matter. 37 CFR 1.57(f).

***Claim Rejections - 35 USC § 112 - 1<sup>st</sup> Paragraph***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 1-4 and 39-54 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in

the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Although the content of the cited three references, DE 44 35 043 A1, DE 44 16 597 A1 and DE 196 09 234 A1 (in German) are found adequate as guidance for a prospective user to make and/or use Applicant's invention, they are improperly incorporated by reference. In order to properly incorporate the three reference into Applicant's disclosure, it is necessary to clearly recite the wording "***incorporated by reference***" in the specification, instead of as casual narratives among the text, as presently done by Applicant. See 37 CFR 1.57 (b), (c) and (d).

Furthermore, since the cited references are "*Essential Material*" according to 37 CFR 1.57 (c), they must be provided in the *English language*. Applicant is required to replace the German document with their equivalent US patent (application) documents, or other NPL documents written in the English language.

10. Claims 1-4 and 39-54 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The process of particle-beam-induced deposition, which is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

The cited three references, DE 44 35 043 A1, DE 44 16 597 A1 and DE 196 09 234 A1 are all in the German language. As such, they do not provide guidance to a prospective user as to how to make and/or use Applicant's invention.

***Claim Rejections - 35 USC § 112 – 2<sup>nd</sup> Paragraph***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 1-4 and 39-54 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites a process of particle-beam-induced deposition, which is not adequately known by a prospective user, since the references cited in the specification are all in the German language, thus effectively rendering the process indefinite.

Consequently, claims 2-4 and 39-54 depending on claim 1 are all deemed indefinite.

***Indication of Allowable Subject Matter***

12. Claims 1-4 and 39-54 are objected to as being rejected under 35 U.S.C. §112/¶.1 and §112/¶.2, but would be allowable upon obviating the present rejection of the parent claim 1 by providing adequate incorporation by reference according to 37 CFR 1.57 (b), (c) and (d).

***Reasons for Indication of Allowable Subject Matter***

13. The following is an examiner's statement of reasons for allowance:

Claim 1 contains allowable subject matter for reciting a process of manufacturing a first particle beam system on a first substrate and at least a second particle beam system on a second substrate using computer-guided particle beam induced deposition technique, whereupon the second particle beam system is then used to produce an additional first particle beam system on the first substrate by computer-guided particle beam induced deposition technique.

Claims 2-4 and 39-54 also contain allowable subject matter for their dependency, either directly or indirectly, to the previously allowable claim 1.

***Relevant Prior Art***

14. This prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- ▶ USPAT 4,976,843 issued to Ward et al., USPGPub 2001/0055649 issued to Ogure et al., and USPGPub 2004/0084407 & 2004/0084408, both issued to Makarov et al. disclose various process of particle beam processing using a first particle beam and a second particle beam. However, none of them teaches to use the second particle beam to produce an additional first particle beam.
- ▶ USPAT 6,039,000, USPAT 6,497,194 and USPAT 7,094,312, all issued to Libby et al., and USPGPub 2002/0067482 issued to Lanio et al., disclose a method of using multiple particle beams. However, the method is used for material processing, not for producing or manufacturing particle beam system(s).

► USPPGPub 2008/0011718, USPPGPub 2005/0072753, USPPGPub 2004/0033425, and USPAT 7,238,294, all issued to the same inventor as the present Applicant (Koop et al.). However, no Double Patenting issue is here in question, since their claims are all different from the present invention; specifically regarding first and second particle beams, wherein the second particle beam is used to produce an additional first particle beam.

***Communications***

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard E Souw, Ph.D., whose telephone number is 571 272 2482. The examiner can normally be reached on Monday thru Friday, 9:00 am to 5:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 571 272 2293. The central fax phone number for the organization where this application or proceeding is assigned is 571 273 8300 for regular communications as well as for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571 272 5993.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Bernard E Souw/  
Primary Examiner, Art Unit 2881